

Service Manual

ORDER NO.
TRT1111

SURFACE-MOUNT TUNE-UP WOOFER SYSTEM TS-WX75A

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

| Type | Model | Power Requirement | Remarks |
|-------|----------|-------------------|---------|
| | TS-WX75A | | |
| XL/UC | ○ | Not supplied | |
| XL/ES | ○ | Not supplied | |

1. SPECIFICATIONS

• Speaker specifications

Size ϕ 200mm (8" Dia.)
Injection-molded polypropylene cone
High compliance, rolled edge
Heat-resistant voice coil
Strontium magnet : 500g (18oz)

• Amplifier

Max. Power output 160W (80Hz, 30%THD)
Continuous power output 80W (80Hz, 0.1%THD)
INPUT LEVEL (at Gain Max)
(RCA) 80mV+80mV/20k Ω
(Speaker line) 1.6V+1.6V/5k Ω
Power source DC14.4V (10.8~15.6V allowable)
Max. current consumption 17A
Grounding Negative ground

- Speaker system Bass reflex type
- Cabinet material Particle board
- Sensitivity 103dB/W (In car, SUV type)
- Size 488mm (19-1/4") (W) \times 249mm (9-3/4") (D)
 \times 236mm (9-1/4") (H)
- Weight (including accessory parts) 8.40kg (18lb 8oz)
- Gross weight (including packaging) 9.44kg (20lb 13oz)

Note :

Specifications and the design are subject to possible modification without notice due to improvements.

2. EXPLODED VIEW AND PARTS LIST

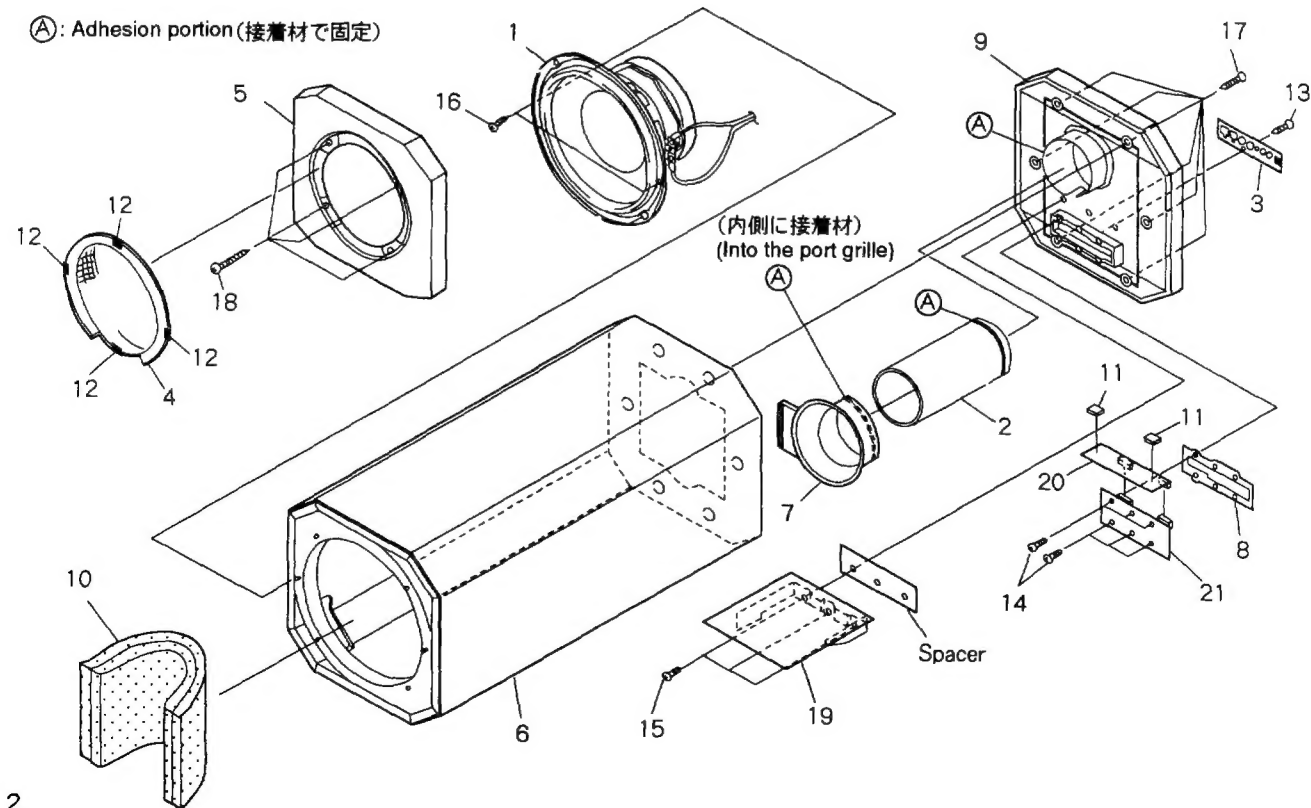
2. 分解図と部品表

NOTES:

● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

● NSP印の部品は、サービス用部品ではありません。従って原則として供給できません。

| Mark マーク | No. No. | Description 名 称 | Part No. 部品番号 | Remark 備 考 | Mark マーク | No. No. | Description 名 称 | Part No. 部品番号 | Remark 備 考 |
|-------------|------------|--------------------------------|------------------|---------------|-------------|------------|-----------------------------------|------------------|---------------|
| | 1 | SPEAKER (XL/UC, XL/ES) スピーカ | 20-193AZ/XL | ×1 | | 12 | Adhesive 粘着材 | TEB-084 | ×4 |
| | 1 | SPEAKER (XL1/JP) スピーカ | 20-196AZ/XL | ×1 | | 13 | Screw ネジ | BPZ26P060FZK | ×1 |
| | 2 | Port ポート | TCC1014 | ×1 | | 14 | Screw ネジ | BBZ30P080FMC | ×6 |
| | 3 | Front Panel フロントパネル | TNS1012 | ×1 | | 15 | Screw ネジ | PMA40P060FMC | ×3 |
| | 4 | Punching Net ネット | TLL1378 | ×1 | | 16 | Screw ネジ | BNC40P160FZK | ×2 |
| | 5 | Front Grille フロントグリル | TLM1329 | ×1 | | 17 | Screw ネジ | BNC40P250FZK | ×6 |
| | 6 | Cabinet キャビネット | TMM1039 | ×1 | | 18 | Screw ネジ | BNC40P400FZK | ×4 |
| | 7 | Port Ring ポートリング | TNL1015 | ×1 | | 19 | POWER AMP UNIT パワーアンプユニット | TWH1015 | ×1 |
| | 8 | Gasket 遮音パッキン | TEB1237 | ×1 | | 20 | CONTROL AMP UNIT コントロールアンプユニット | TWG1008 | ×1 |
| | 9 | Heat Sink ヒートシンク | TNA1374 | ×1 | | 21 | SWITCH BOARD UNIT スイッチ基板ユニット | TWS1023 | ×1 |
| | 10 | Sound Absorbent 吸音材 | TED1197 | ×2 | | | | | |
| | 11 | Packing パッキン | TED1283 | ×2 | | | | | |



3. PARTS LIST OF PACKING

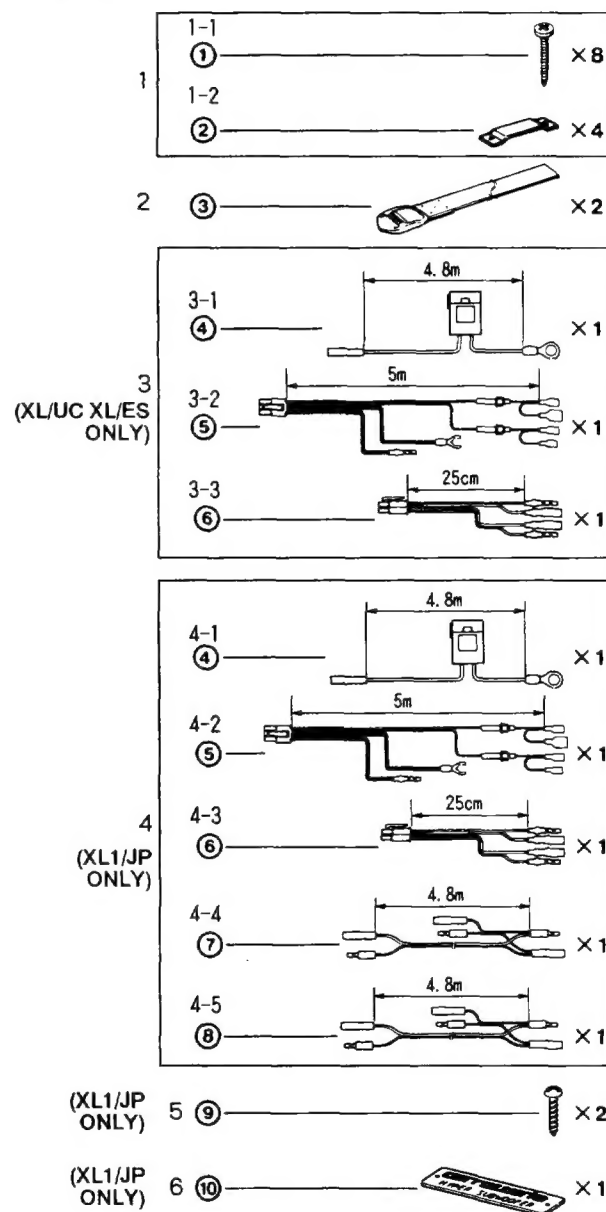
3. 梱包部品表

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- NSP印の部品は、サービス用部品ではありません。従って原則として供給できません。

| Mark | No. | Description | Part No. | Remark |
|------|-----|--------------------------|--------------|----------|
| マーク | No. | 名 称 | 部品番号 | 備 考 |
| | 1 | Installation Kit | TEA1272 | ×1 |
| | | 取付部品袋 | | |
| NSP | 1-1 | Screw | BNC40P250FZK | ×8 |
| | | ネジ | | |
| NSP | 1-2 | Fitting Metal | TNA1220 | ×4 |
| | | 取付金具 | | |
| | 2 | Belt Assy | TXH1427 | ×1 |
| | | ベルトASSY | | |
| | 3 | Cord Assy (XL/UC, XL/ES) | TXH1471 | ×1 |
| | | コードASSY | | |
| NSP | 3-1 | Cord (コ-ド) | TDC2033 | ×1 |
| NSP | 3-2 | Cord (コ-ド) | TDC2031 | ×1 |
| NSP | 3-3 | Cord (コ-ド) | TDC2032 | ×1 |
| | 4 | Cord Assy (XL1/JP) | TXH1473 | ×1 |
| | | コードASSY | | |
| NSP | 4-1 | Cord (コ-ド) | TDC2033 | ×1 |
| NSP | 4-2 | Cord (コ-ド) | TDC2031 | ×1 |
| NSP | 4-3 | Cord (コ-ド) | TDC2032 | ×1 |
| NSP | 4-4 | Cord (コ-ド(L), 緑) | TDC2046 | ×1 |
| NSP | 4-5 | Cord (コ-ド(R), 灰) | TDC2045 | ×1 |
| | 5 | Parts Bag (XL1/JP ONLY) | TEA1581 | ×1 |
| | | 取付部品袋 | | |
| NSP | | Screw (ネジ) | VNC30P120FGO | ×2 |
| | 6 | Badge (XL1/JP ONLY) | TAM1139 | ×1 |
| | | バッジ | | |
| | | Operating Instructions | TRD1088 | ×1 |
| | | 取扱説明書 (XL/UC) | | |
| | | Operating Instructions | TRD1095 | ×1 |
| | | 取扱説明書 (XL/ES) | | |
| | | Operating Instructions | TRA1461 | ×1 |
| | | 取扱説明書 (XL1/JP) | | |
| | | Operating Instructions | TRA1442 | ×1 |
| | | 取扱説明書 (XL1/JP) | | |
| | | Packing Case | THF2628 | ×1 |
| | | 個装ケース (XL/UC) | | |
| | | Packing Case | THF2629 | ×1 |
| | | 個装ケース (XL/ES) | | |
| | | Packing Case | THF2631 | ×1 |
| | | 個装ケース (XL1/JP) | | |
| | | Styrofoam Protector | TEC1787 | One pair |
| | | スチロテクター | | 1組 |

● PARTS INCLUDED 付属品

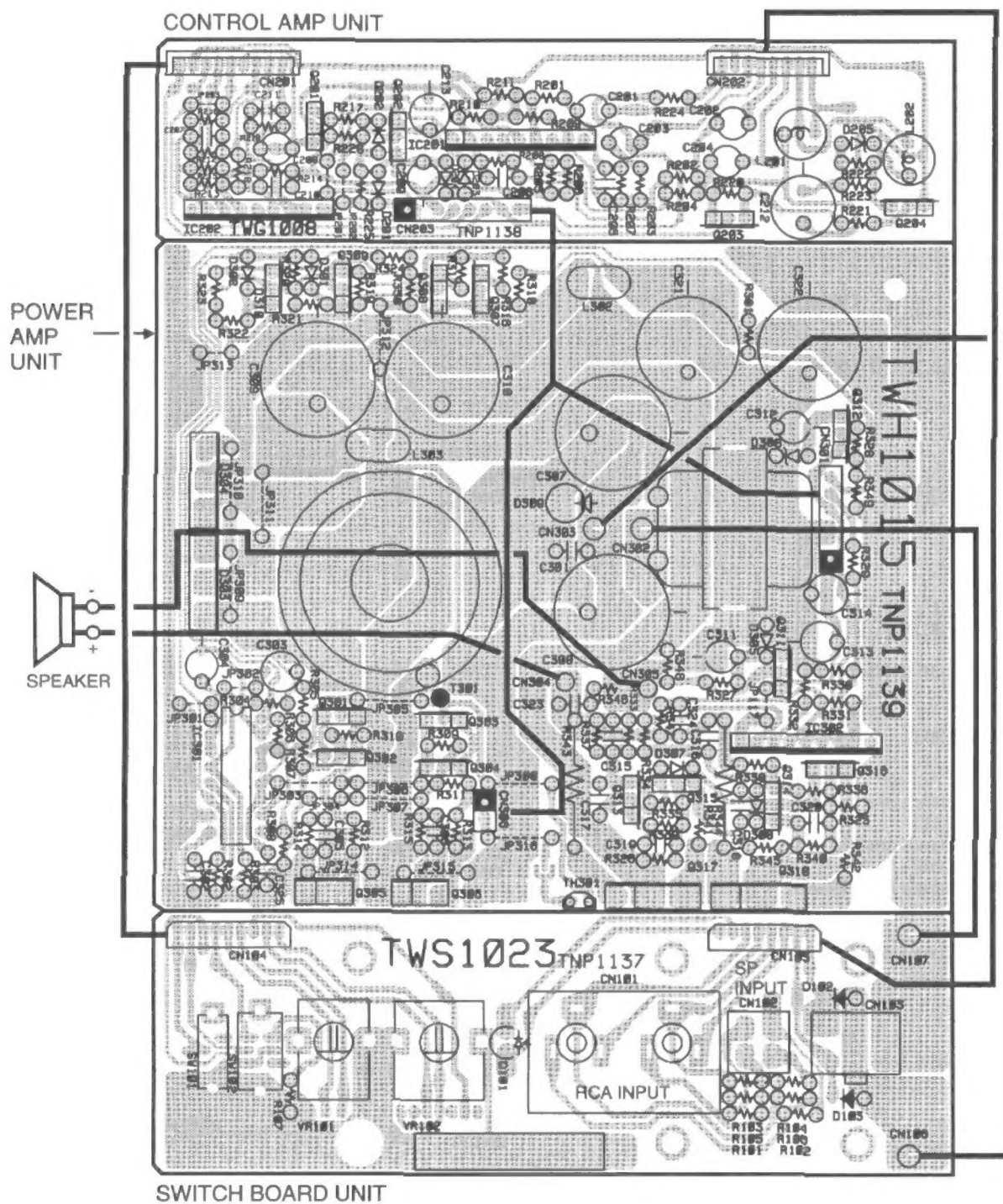


4. AMP UNIT

4. アンプユニット

4.1 PCB DIAGRAM

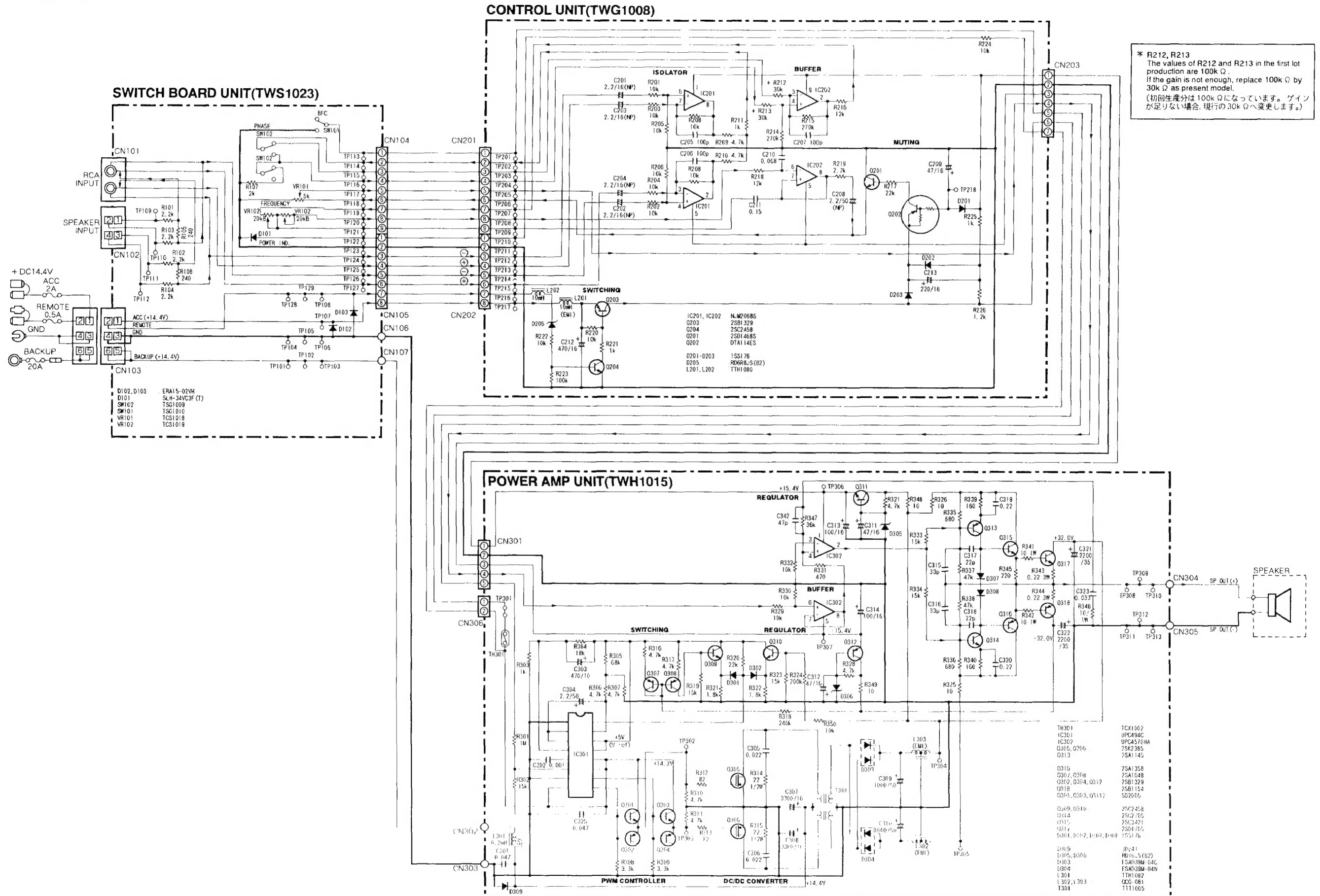
4.1 PCB図



•This diagram is viewed from the mounted parts side.

4.2 SCHEMATIC DIAGRAM

4.2 回路図



5. PCB PARTS LIST

5. 基板 ASSY の部品表

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.
Ex.1 When there are 2 effective digits(any digit apart from 0), such as 560 ohm and 47k ohm(tolerance is shown by J=5%, and K=10%).
560 Ω \rightarrow $56 \times 10^1 \rightarrow 561$ RD1/4PU $\boxed{5}\boxed{6}\boxed{1}J$
47k Ω \rightarrow $47 \times 10^3 \rightarrow 473$ RD1/4PU $\boxed{4}\boxed{7}\boxed{3}J$
0.5 Ω \rightarrow 0R5 RN2H $\boxed{0}\boxed{R}\boxed{5}K$
1 Ω \rightarrow 1R0 RS1P $\boxed{1}\boxed{R}\boxed{0}K$
Ex.2 When there are 3 effective digits(such as in high precision metal film resistors).
5.62k Ω \rightarrow $562 \times 10^1 \rightarrow 5621$ RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}F$

- NSP 印の部品は、サービス用部品ではありません。従って原則として供給できません。
 - Δ 印の部品は、安全上重要な部品です。交換する時は、安全および性能維持のため必ず指定の部品をご使用ください。
 - ◎ 印の部品は、供給に時間を要するか、場合によっては供給をお断りすることがあります。
- 注. 抵抗器は、□□□に抵抗値をコードで入れ、本来の部品番号に直して発注してください。

- 例 1 560 Ω 、47k Ω など、0 以外の数字（有効数字）が 2 桁の場合
(誤差が J = \pm 5 %、K = \pm 10 %の抵抗器はすべて該当)
560 Ω \rightarrow $56 \times 10^1 \rightarrow 561$ RD1/4PU $\boxed{5}\boxed{6}\boxed{1}J$
47k Ω \rightarrow $47 \times 10^3 \rightarrow 473$ RD1/4PU $\boxed{4}\boxed{7}\boxed{3}J$
0.5 Ω \rightarrow 0R5 RN2H $\boxed{0}\boxed{R}\boxed{5}K$
1 Ω \rightarrow 1R0 RS1P $\boxed{1}\boxed{R}\boxed{0}K$
例 2 有効数字が 3 桁の場合（誤差が F = \pm 1 %の抵抗器）
5.62k Ω \rightarrow $562 \times 10^1 \rightarrow 5621$ RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}F$

| Mark | No. | Description | Part No. | Mark | No. | Description | Part No. |
|------------------------|-------------------|-------------|----------|------|------------------------|-------------|-------------|
| マーク | No. | 名 称 | 部 品 番 号 | マーク | No. | 名 称 | 部 品 番 号 |
| LIST OF UNIT (ユニットの一覧) | | | | | | | |
| NSP | AMP UNIT | | TWX1014 | | Q309, Q310 | | 2SC2458 |
| | アンプユニット | | | | Q314 | | 2SC2705 |
| | POWER AMP UNIT | | TWH1015 | | Q315 | | 2SC3421 |
| | パワーアンプユニット | | | | Q317 | | 2SD1705 |
| | CONTROL AMP UNIT | | TWG1008 | | D301, D302, D307, D308 | | 1SS176 |
| | コントロールアンプユニット | | | | D309 | | 3DZ41 |
| | SWITCH BOARD UNIT | | TWS1023 | | D305, D306 | | RD16JS(B2) |
| | スイッチボードユニット | | | | D303 | | ESAD39M-04C |
| | | | | | D304 | | ESAD39M-04N |

POWER AMP UNIT (パワーアンプユニット)

SEMICONDUCTORS (半導体)

| | |
|------------------|-----------|
| TH301 | TCX1002 |
| 1C301 | UPC494C |
| 1C302 | UPC4570HA |
| Q305, Q306 | 2SK2385 |
| Q313 | 2SA1145 |
| Q316 | 2SA1358 |
| Q307, Q308 | 2SA1048 |
| Q302, Q304, Q312 | 2SB1329 |
| Q318 | 2SB1154 |
| Q301, Q303, Q311 | 2SD2005 |

COIL (コイル)

| | |
|------------------|---------|
| L301 (0.2mH) EMI | TTH1082 |
| L302, L303 EMI | CCG-081 |

TRANSFORMER (トランス)

| | |
|------|---------|
| T301 | TTT1005 |
|------|---------|

CAPACITORS (コンデンサ)

| | |
|-------------------------------|-------------|
| C302 | CQMA102J50 |
| C305, C306 | CFTNA223J50 |
| C319, C320 | CFTNA224J50 |
| C323 | CFTNA333J50 |
| C317, C318 | CCCSL220J50 |
| C315, C316 | CCCSL330J50 |
| C324 | CCCSL470J50 |
| C301, C325 | CGCYX473K25 |
| C313, C314 | CEAS101M16 |
| C309, C310 (1000 μ F/35V) | TCH1227 |

| Mark | No. | Description | Part No. |
|------|------------|--------------------|------------|
| マーク | No. | 名 称 | 部 品 番 号 |
| | C321, C322 | (2200 μ F/35V) | TCH1229 |
| | C304 | | CEAS2R2M50 |
| | C311, C312 | | CEAS470M16 |
| | C303 | | CEAS471M10 |
| | C307, C308 | (3300 μ F/16V) | TCH1230 |

RESISTORS (抵抗器)

| | |
|--------------------------|-------------|
| R341, R342, R346 | RS1V100JL |
| R343, R344 | RS3LMFR22J |
| Other resistors(その他の抵抗器) | RD1/4PU□□□J |

OTHERS (その他)

| | | |
|--------------|----------------|---------|
| | BRACKET(ブラケット) | TNA1376 |
| CN301, CN306 | CORD(コード) | TDC2034 |
| CN302 | CORD(コード) | TDC2035 |
| CN304, CN305 | CORD(コード) | TDC2036 |
| CN303 | CORD(コード) | TDC2039 |

CONTROL AMP UNIT (コントロールアンプユニット)

SEMICONDUCTORS (半導体)

| | |
|--------------|-------------|
| IC201, IC202 | NJM2068S |
| Q203 | 2SB1329 |
| Q204 | 2SC2458 |
| Q201 | 2SD1468S |
| Q202 | DTA114ES |
| D201-D203 | ISS176 |
| D205 | RD6R8JS(B2) |

COILS (コイル)

| | |
|-----------------------|---------|
| L201, L202 (10mH) EMI | TTH1080 |
|-----------------------|---------|

CAPACITORS (コンデンサ)

| | |
|------------------------|---------------|
| C211 | CFTNA154J50 |
| C210 | CFTNA683J50 |
| C205-C207 | CKCYB101K50 |
| C209 | CEAS470M16 |
| C212 | CEAS471M16 |
| C201 C204, C208 | CEA2R2M50NPLL |
| C213 (220 μ F/16V) | TCH1219 |

RESISTORS (抵抗器)

| | |
|-----------------------|-------------|
| All resistors(全ての抵抗器) | RD1/4PU□□□J |
|-----------------------|-------------|

OTHERS (その他)

| | |
|-----------------------|---------|
| CN202 CONNECTOR(コネクタ) | TKS1066 |
| CN201 CONNECTOR(コネクタ) | TKS1067 |

SWITCH BOARD UNIT (スイッチ基板ユニット)

SEMICONDUCTORS (半導体)

| | |
|------------|---------------|
| D102, D103 | ERA15-02VH |
| D101 | SLH-34VC3F(T) |

SWITCHES (スイッチ)

| | |
|-------|---------|
| SW102 | TSG1009 |
| SW101 | TSG1010 |

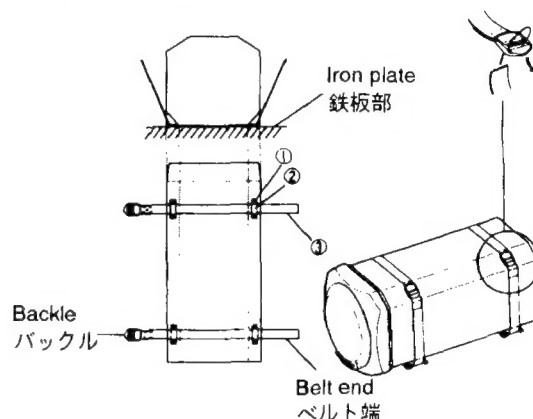
| Mark | No. | Description | Part No. |
|------------------------|--------------------------|-------------|-------------|
| マーク | No. | 名 称 | 部 品 番 号 |
| RESISTORS (抵抗器) | | | |
| | VR101 (5k Ω) | | TCS1018 |
| | VR102 (20k Ω) | | TCS1019 |
| | Other resistors(その他の抵抗器) | | RD1/4PU□□□J |

OTHERS (その他)

| | | |
|-------|---------------------|---------|
| CN201 | RCA JACK(RCAジャック) | TKS1061 |
| CN103 | CONNECTOR(コネクタ) | TKS1062 |
| CN102 | CONNECTOR(コネクタ) | TKS1063 |
| CN105 | CONNECTOR(コネクタ) | TKS1064 |
| CN106 | CONNECTOR(コネクタ) | TKS1065 |
| | LED SPACER(LEDスペーサ) | MNK1123 |

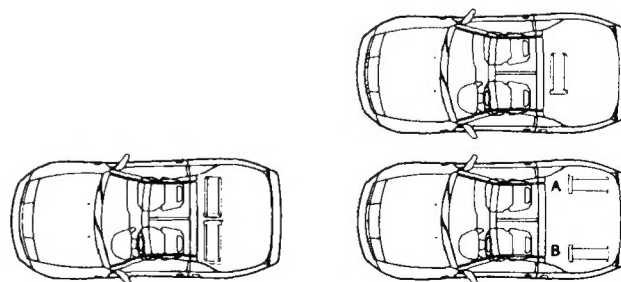
6. HOW TO INSTALL

6. 取付方法



7. EXAMPLE OF MOUNTING

7. 取付例



Either A or B if one piece.
1個の場合はAまたはBの位置に取付けて下さい。